



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,595	12/17/2003	Vijay K. Arora	1410/77081	5884
48940 7590 06/14/2007 FITCH EVEN TABIN & FLANNERY 120 S. LASALLE STREET SUITE 1600 CHICAGO, IL 60603-3406			EXAMINER THAKUR, VIREN A	
			ART UNIT 1761	PAPER NUMBER
			MAIL DATE 06/14/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/736,595	ARORA ET AL.	
	Examiner	Art Unit	
	Viren Thakur	1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. As a result of the amendment to the claims, the rejection of claims 12 and 26 under 35 U.S.C. 112, second paragraph has been withdrawn.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. **Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Instant claims 1 and 14 recite the limitation "single stage." In light of Applicant's specification on page 5, lines 2-3 which discloses that "the invention is preferably embodied in a single stage process for drying, roasting, and grinding of green coffee beans in one unit operation", the Examiner respectfully asserts that a single stage can encompass multiple steps and thus it is unclear as to how the elements of the process claims are defined within the phrase "single stage." Furthermore, instant claims 11 and 24 recite "re-introducing coffee beans in the solid particulate product having particle sizes as large as or more than the predetermined size into the upper enclosure. In light of the indefinite-ness of the limitation "single stage" the above stated limitations of instant claims 11 and 24 contradict the limitation single-stage, since re-introduction into the upper enclosure could be considered a different stage of the treatment process.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 1, 5-10, 13-14, 18-23, 25 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polifka (U.S. 2002/0027173 A1).**

The reference and rejection is taken as cited in the prior Office Action, mailed October 4, 2006.

7. **Claims 1, 5-10, 13-14, 18-23, 25 and 27-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Polifka (US 2002/0027173 A1), and further in view of Enomoto (U.S. 5,307,733) and Tidland et al. (U.S. 5,958,494).**

The reference and rejection is taken as cited in the prior Office Action, mailed October 4, 2006.

Art Unit: 1761

8. Claim 2 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polifka (US 2002/0027173 A1) in view of Enomoto (U.S. 5,307,733) and Tidland et al. (U.S. 5,958,494) as applied to Claims 1, 5-10, 13-14, 18-23, 25 and 27-28, above and further in view of Pultinas, Jr (U.S. 4,591,508).

The reference and rejection is taken as cited in the prior Office Action, mailed October 4, 2006.

9. Claims 3, 4, 11, 16, 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polifka (US 2002/0027173 A1) in view of Enomoto (U.S. 5,307,733) and Tidland et al. (U.S. 5,958,494) as applied to Claims 1, 5-10, 13-14, 18-23, 25 and 27-28, above, and further in view of Reeves et al. (U.S. 3,821,430).

The reference and rejection is taken as cited in the prior Office Action, mailed October 4, 2006.

10. Claims 2-4, 11, 12, 15-17, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polifka (US 2002/0027173 A1) in view of Enomoto (U.S. 5,307,733) and Tidland et al. (U.S. 5,958,494) as applied to Claims 1, 5-10, 13-14, 18-23, 25 and 27-28, above, and in further view of Ruiz-Avila (WO 00/01256).

The reference and rejection is taken as cited in the prior Office Action, mailed October 4, 2006.

11. Claims 12 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polifka (US 2002/0027173 A1) in view of Enomoto (U.S. 5,307,733), Tidland et al. (U.S. 5,958,494) and Reeves et al. (U.S. 3,821,430) as applied to Claims 1, 3-11, 13-14, 16-24, 25 and 27-28, above, and further in view of Eichner (U.S. 2004/0142078 A1).

The reference and rejection is taken as cited in the prior Office Action, mailed October 4, 2006.

Response to Arguments

12. Applicants' arguments on page 9 and 12 that the roasting for producing coffee beans needs to be "just right" to produce the desired coffee flavors and aromas and that one of ordinary skill in the art would not reasonably expect based on the knowledge in the art that the use of vortex grinding with green coffee beans would provide a dried powder that is comparable to those produced by conventional methods has been fully considered but is not persuasive. Applicants have not provided evidence as to how the prior art device would not perform the same as that of the instantly claimed invention if the prior art teaches the process as instantly claimed. Furthermore, Applicants have not provided any unexpected and surprising results that would render the claimed invention nonobvious. The Examiner further asserts that any conditions which would resulted in these unexpected and surprising results has not been claimed; there are no specific conditions of the process set forth in the claims that have not been addressed by the prior art. Regarding the argument that coffee beans need to be "just right" the Examiner asserts that this language is unclear in that different types of coffee require different conditions. For example, light and dark coffee grind requires different roasting conditions to produce the desired result; therefore to state a condition of "just right" does not appreciate the various conditions that can be used to produce different types of coffee grind. The Examiner respectfully asserts that to one having ordinary skill in the art of coffee grinding, it would have been obvious to have applied the appropriate processing conditions (time, temperature and velocity to name a few) to produce an acceptable product. Such conditions are well known to the ordinarily skilled artisan, therefore to use a device such as that of Polifka, which teaches grinding agricultural product, would have resulted in a reasonable expectation of success to produce acceptable coffee grind, for one having ordinary skill in the art of roasting and grinding coffee. Furthermore, if the process of roasting and grinding coffee requires a condition that is "just right" Applicants have not claimed

such a condition in the instant process claims. Therefore, based on the process steps as claimed, the instant invention is still deemed obvious over the prior art.

13. Applicants' arguments on page 12 that there is no teaching or suggestion that green coffee beans could be treated in a vortex grinding system to produce a dried, roasted and ground coffee in a single step has been fully considered but is not persuasive. The Examiner respectfully asserts that Polifka provides motivation to the ordinary skilled artisan in paragraphs 0042 and 0044 on pages 6 and 7 of the reference. Polifka teaches that "practical applications which include, but are not limited to, the grinding, drying and pasteurization of animal or agricultural products..." Further Polifka teaches that agricultural products include all types of grains can be ground into a flour and dried in the same operation and herbs can be ground into a fine powder. To the ordinarily skilled artisan it would have been obvious that the coffee bean is an agricultural product and is furthermore an agricultural product that has been well known to be heated, dried and milled. Therefore, since coffee beans fall into the category of agricultural products that require grinding into a powder, it would have been obvious to one having ordinary skill in the art to use the device and process of Polifka to dry, roast, and grind coffee.
14. Regarding Applicants' arguments that one of ordinary skill in the art would not reasonably expect based on the knowledge in the art that the use of vortex grinding with green coffee beans would provide a dried powder that is at the same time roasted such that it is comparable with green coffee beans roasted and ground using conventional methods has been fully considered but is not persuasive. The Examiner respectfully asserts that it would have been well within the skill of one having ordinary skill in the art of preparing coffee grind to provide acceptable coffee grind as compared with other methods. It would have been obvious to the ordinarily skilled artisan, irrespective of the device used, to ensure that the ground coffee is made to a standard that would have been acceptable by the consumer. Furthermore, Applicants' argument that even if the ordinarily skilled artisan used the grinding system of Polifka, "might expect that desired flavors

and aromas, even if product would be lost in the air stream and thus not remain in the desired product" has been fully considered but is not persuasive. Applicant states that one of ordinary skill in the art *might expect* the desired flavors and aromas to be lost in the air stream.

Nevertheless, the potential for expecting the loss of desired flavors and aromas would not have prevented a reasonable expectation of success to the ordinarily skilled artisan. For instance, Polifka teaches grinding plants such as herbs to increase potency (see paragraph 0044).

"Potency" is well known to relate to flavor and aroma of herbs. Given this teaching, it would have been obvious to one having ordinary skill in the art that the final product as a result of the process and device of Polifka would still have "potency." Furthermore, the Examiner asserts that Applicants' argument is merely speculative with regards to whether aromas would be lost and further at it would have been obvious that *some level* of the aroma of the coffee bean would be lost regardless of the process. Furthermore, it is unclear as to what Applicants refer to as the air stream in the reference. Nevertheless, the instant claims also disclose an air stream, thus it is not clear as to how the instant invention would prevent desired flavors and aromas to be lost in the air stream and the prior art would not.

15. Furthermore, in response to Applicants' argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, as discussed above, Polifka teaches heating, grinding and drying a material and wherein the materials which can be heated, ground and dried can be agricultural products, such as grains that require grinding into a powder. Further Polifka teaches plants that are ground, such as herbs to increase potency. Therefore, given these teachings it

Art Unit: 1761

would have been obvious to one having ordinary skill in the art that coffee beans are agricultural products that have been well known to have been heated, ground and dried into a powder.

16. Regarding Applicants' arguments in the remarks that the primary and secondary references does not suggest or teach a roasting, drying and grinding simultaneously in a single step, as required by the present claims. The Examiner asserts that Applicants' arguments are not commensurate in scope with the claims. The claims do not recite simultaneous roasting, drying and grinding or roasting, drying and grinding simultaneously in a single step, but rather, state "a single-stage coffee bean heat treatment." In light of Applicant's specification on page 5, lines 2-3 which discloses that "the invention is preferably embodied in a single stage process for drying, roasting, and grinding of green coffee beans in one unit operation", the Examiner respectfully asserts that a single stage can encompass multiple steps, such as introducing air into an enclosure and introducing into the enclosure green coffee beans. Furthermore, instant claims 1 and 14 only recite wherein the "green coffee beans are dried, roasted, and ground before reaching a lower end of the lower enclosure." This limitation does not read on simultaneous drying, roasting and grinding. This could occur simultaneously but the claims do not recite such limitation and the limitation single stage, in light of Applicants' specification, does not further limit the claims to simultaneous drying, roasting and grinding. The Examiner notes that this is only an example as to how the claims have been interpreted and not a suggestion for amendments to be made to the claims.
17. Applicant's arguments on page 14 stating that it is not clear as to what type of system would be provided by a system devised by the combining of Polifka, Enomoto and Tidland et al. has been fully considered but is not deemed persuasive. The Examiner respectfully asserts that Enomoto and Tidland have been used to teach cyclonic air flow process which have been well known to be used in the art for the purpose of minimizing the amount of time required to freshly grind coffee beans and for the purpose of providing more efficient grinding and roasting systems. In light of

the discussion above, the primary reference to Polifka teaches a single stage system and the secondary references have been relied on to further teach minimizing the steps required to roast and grind coffee beans.

18. Applicant's arguments on page 15 stating that Pultinas Jr. does not correct the deficiencies noted in the primary (Polifka) and secondary references has been fully considered but is not deemed persuasive. As discussed above, Polifka teaches the single stage process as instantly claimed and Pultinas Jr. is only relied on to teach a moisture content within coffee beans that are roasted, dried and ground to be between 3 and 6 percent for the purpose of preventing staleness when brewing and brittleness during handling and packaging (Column 4, Line 66 to Column 5, Line 6).
19. Applicant's arguments on page 16 stating that Reeves et al. does not correct the deficiencies noted in the primary (Polifka) and secondary references has been fully considered but is not deemed persuasive. As discussed above, Polifka teaches the single stage process as instantly claimed and Reeves et al. is only relied on to teach grinding the coffee beans to a specific particle size for the purpose of ensuring that when blended with other components, such a blend would have had the strength to withstand abrasion and segregation and thus ensuring a quality tasting but more economical coffee bean.
20. Applicant's arguments on page 16 stating that Ruiz-Avila does not correct the deficiencies noted in the primary (Polifka) and secondary references has been fully considered but is not deemed persuasive. As discussed above, Polifka teaches the single stage process as instantly claimed and Ruiz-Avila is relied on to teach screening the discharged ground material for a specified particle size, collecting the material in a container using a rotary valve and recycling the material not having the correct particle size back to the grinding chamber. Ruiz-Avila teach using a sealed rotary valve for discharging a plant material that had been comminuted and then dried for the purpose of ensuring a ground material having a consistent texture. Ruiz-Avila is further relied on

to teach recycling of material of undesired particle size for the purpose of maximizing the efficiency of the grinding process and to ensure the consistent texture of the ground material.

21. Applicant's arguments on page 16 stating that Eichner does not correct the deficiencies noted in the primary (Polifka) and secondary references has been fully considered but is not deemed persuasive. As discussed above, Polifka teaches the single stage process as instantly claimed and Eichner is relied on only to teach using an air tight valve for the release of the ground coffee beans into a container for the purpose of providing a means of discharging the coffee through the use of pressure release valves. As a result, this would have also ensured an air-tight seal since it is known that pressure release valves allow for the unidirectional flow of air, thus preventing air from entering into the chamber and further ensuring release of the contents into the container.

Art Unit: 1761

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viren Thakur whose telephone number is (571)-272-6694. The examiner can normally be reached on Monday through Friday from 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571)272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Viren Thakur
Examiner
Art Unit: 1761



KEITH HENDRICKS
PRIMARY EXAMINER